

DOCUMENT REVIEW

ED 030 539

RE 001 827

By-Cohen, S. Alan, Reinstein, Steven

Skills Centers. A Systems Approach to Reading Instruction.

Pub Date Mar 69

Note-10p.. Paper presented at the College Reading Association conference, Boston, Mass., Mar. 13-15, 1969

EDRS Price MF-\$0.25 HC-\$0.60

Descriptors-*Disadvantaged Youth, Individualized Programs, *Junior High School Students, Learning Theories, Methodology, *Reading Improvement, *Systems Approach, Teacher Role

A program developed at Yeshiva University to emphasize self-directing, self-correcting techniques for teaching basic reading skills to socially disadvantaged junior high school students is discussed. Seven laws of learning which underlie the guidelines for the program are presented. The following four guidelines to effective methodology are listed. (1) high intensity learning, (2) individualized content, (3) individualized progress, and (4) individualized material level. The teacher's role is examined and observed to include facilitating student-directed activities by arranging conditions conducive to learning, matching materials to individual needs, interacting with the students, and evaluating student progress. A specific program description indicates that all students are pretested on the Cohen-Cloward Diagnostic Test of Word Attack Skills and the California Reading Test which yield diagnostic patterns for each child and that classes of 20 to 30 students rotate among the three learning centers Comprehension, Word-Study Skills, and Word Analysis-Vocabulary Centers. The activities of each center are briefly described. (RT)

CRA

SKILLS CENTERS: A SYSTEMS APPROACH TO READING INSTRUCTION
By S. Alan Cohen & Steven Reinstein
READING AND LANGUAGE ART CENTER
FERKAUF GRADUATE SCHOOL, YESHIVA UNIVERSITY

This paper describes a systems approach to reading improvement developed at the Reading and Language Arts Center at Ferkauf Graduate School of Yeshiva University. The system was designed to be used in schools for urban disadvantaged children grades 4-12. Applications of the system over the past five years with middle class, on-grade achievers indicates that, as expected, they achieve significant gains also.

HISTORY OF THE METHOD

In 1962, the skills stations, self-directing, self-correcting technique for teaching basic reading skills, was piloted at Lyman School for Boys, a reform school for disadvantaged adolescent delinquents by Dr. Mabel Noall and Dr. S. Alan Cohen of Boston University. It was successful.

In the summer of 1963, it was demonstrated in the professional reading courses at Boston University. Again it proved successful. From 1963 to 1965, the techniques were tested in a number of settings at Mobilization for Youth on New York's Lower East Side. Reports of results are available from the Education Division of Mobilization for Youth. During these demonstrations, techniques and materials were refined. Finally, during the summer of 1964 the methods were fully tested at P.S. 140 at Mobilization for Youth's Demonstration Experimental Reading School. This was replicated again in 1965 under grants from the Office of Economic Opportunity to the Two Bridges Project, a joint community and school organization on New York's Lower East Side. This program was planned and staffed by participants in the previous Mobilization for Youth's program and was patterned after the summer experiment of 1964. Again, post testing showed statistically significant gains in disadvantaged retarded school achievers.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
229
230
231
232
233
234
235
236
237
238
239
239
240
241
242
243
244
245
246
247
248
249
249
250
251
252
253
254
255
256
257
258
259
259
260
261
262
263
264
265
266
267
268
269
269
270
271
272
273
274
275
276
277
278
279
279
280
281
282
283
284
285
286
287
288
289
289
290
291
292
293
294
295
296
297
298
299
299
300
301
302
303
304
305
306
307
308
309
309
310
311
312
313
314
315
316
317
318
319
319
320
321
322
323
324
325
326
327
328
329
329
330
331
332
333
334
335
336
337
338
339
339
340
341
342
343
344
345
346
347
348
349
349
350
351
352
353
354
355
356
357
358
359
359
360
361
362
363
364
365
366
367
368
369
369
370
371
372
373
374
375
376
377
378
379
379
380
381
382
383
384
385
386
387
388
389
389
390
391
392
393
394
395
396
397
398
399
399
400
401
402
403
404
405
406
407
408
409
409
410
411
412
413
414
415
416
417
418
419
419
420
421
422
423
424
425
426
427
428
429
429
430
431
432
433
434
435
436
437
438
439
439
440
441
442
443
444
445
446
447
448
449
449
450
451
452
453
454
455
456
457
458
459
459
460
461
462
463
464
465
466
467
468
469
469
470
471
472
473
474
475
476
477
478
479
479
480
481
482
483
484
485
486
487
488
489
489
490
491
492
493
494
495
496
497
498
499
499
500
501
502
503
504
505
506
507
508
509
509
510
511
512
513
514
515
516
517
518
519
519
520
521
522
523
524
525
526
527
528
529
529
530
531
532
533
534
535
536
537
538
539
539
540
541
542
543
544
545
546
547
548
549
549
550
551
552
553
554
555
556
557
558
559
559
560
561
562
563
564
565
566
567
568
569
569
570
571
572
573
574
575
576
577
578
579
579
580
581
582
583
584
585
586
587
588
589
589
590
591
592
593
594
595
596
597
598
599
599
600
601
602
603
604
605
606
607
608
609
609
610
611
612
613
614
615
616
617
618
619
619
620
621
622
623
624
625
626
627
628
629
629
630
631
632
633
634
635
636
637
638
639
639
640
641
642
643
644
645
646
647
648
649
649
650
651
652
653
654
655
656
657
658
659
659
660
661
662
663
664
665
666
667
668
669
669
670
671
672
673
674
675
676
677
678
679
679
680
681
682
683
684
685
686
687
688
689
689
690
691
692
693
694
695
696
697
697
698
699
699
700
701
702
703
704
705
706
707
708
709
709
710
711
712
713
714
715
716
717
718
719
719
720
721
722
723
724
725
726
727
728
729
729
730
731
732
733
734
735
736
737
738
739
739
740
741
742
743
744
745
746
747
748
749
749
750
751
752
753
754
755
756
757
758
759
759
760
761
762
763
764
765
766
767
768
769
769
770
771
772
773
774
775
776
777
778
779
779
780
781
782
783
784
785
786
787
788
789
789
790
791
792
793
794
795
796
797
797
798
799
799
800
801
802
803
804
805
806
807
808
809
809
810
811
812
813
814
815
816
817
818
819
819
820
821
822
823
824
825
826
827
828
829
829
830
831
832
833
834
835
836
837
838
839
839
840
841
842
843
844
845
846
847
848
849
849
850
851
852
853
854
855
856
857
858
859
859
860
861
862
863
864
865
866
867
868
869
869
870
871
872
873
874
875
876
877
878
879
879
880
881
882
883
884
885
886
887
888
889
889
890
891
892
893
894
895
896
897
897
898
899
899
900
901
902
903
904
905
906
907
908
909
909
910
911
912
913
914
915
916
917
918
919
919
920
921
922
923
924
925
926
927
928
929
929
930
931
932
933
934
935
936
937
938
939
939
940
941
942
943
944
945
946
947
948
949
949
950
951
952
953
954
955
956
957
958
959
959
960
961
962
963
964
965
966
967
968
969
969
970
971
972
973
974
975
976
977
978
979
979
980
981
982
983
984
985
986
987
988
989
989
990
991
992
993
994
995
996
997
997
998
999
999
1000
1001
1002
1003
1004
1005
1006
1007
1008
1009
1009
1010
1011
1012
1013
1014
1015
1016
1017
1018
1019
1019
1020
1021
1022
1023
1024
1025
1026
1027
1028
1029
1029
1030
1031
1032
1033
1034
1035
1036
1037
1038
1039
1039
1040
1041
1042
1043
1044
1045
1046
1047
1048
1049
1049
1050
1051
1052
1053
1054
1055
1056
1057
1058
1059
1059
1060
1061
1062
1063
1064
1065
1066
1067
1068
1069
1069
1070
1071
1072
1073
1074
1075
1076
1077
1078
1079
1079
1080
1081
1082
1083
1084
1085
1086
1087
1088
1089
1089
1090
1091
1092
1093
1094
1095
1096
1097
1097
1098
1099
1099
1100
1101
1102
1103
1104
1105
1106
1107
1108
1109
1109
1110
1111
1112
1113
1114
1115
1116
1117
1118
1119
1119
1120
1121
1122
1123
1124
1125
1126
1127
1128
1129
1129
1130
1131
1132
1133
1134
1135
1136
1137
1138
1139
1139
1140
1141
1142
1143
1144
1145
1146
1147
1148
1149
1149
1150
1151
1152
1153
1154
1155
1156
1157
1158
1159
1159
1160
1161
1162
1163
1164
1165
1166
1167
1168
1169
1169
1170
1171
1172
1173
1174
1175
1176
1177
1178
1179
1179
1180
1181
1182
1183
1184
1185
1186
1187
1188
1189
1189
1190
1191
1192
1193
1194
1195
1196
1197
1197
1198
1199
1199
1200
1201
1202
1203
1204
1205
1206
1207
1208
1209
1209
1210
1211
1212
1213
1214
1215
1216
1217
1218
1219
1219
1220
1221
1222
1223
1224
1225
1226
1227
1228
1229
1229
1230
1231
1232
1233
1234
1235
1236
1237
1238
1239
1239
1240
1241
1242
1243
1244
1245
1246
1247
1248
1249
1249
1250
1251
1252
1253
1254
1255
1256
1257
1258
1259
1259
1260
1261
1262
1263
1264
1265
1266
1267
1268
1269
1269
1270
1271
1272
1273
1274
1275
1276
1277
1278
1279
1279
1280
1281
1282
1283
1284
1285
1286
1287
1288
1289
1289
1290
1291
1292
1293
1294
1295
1296
1297
1297
1298
1299
1299
1300
1301
1302
1303
1304
1305
1306
1307
1308
1309
1309
1310
1311
1312
1313
1314
1315
1316
1317
1318
1319
1319
1320
1321
1322
1323
1324
1325
1326
1327
1328
1329
1329
1330
1331
1332
1333
1334
1335
1336
1337
1338
1339
1339
1340
1341
1342
1343
1344
1345
1346
1347
1348
1349
1349
1350
1351
1352
1353
1354
1355
1356
1357
1358
1359
1359
1360
1361
1362
1363
1364
1365
1366
1367
1368
1369
1369
1370
1371
1372
1373
1374
1375
1376
1377
1378
1379
1379
1380
1381
1382
1383
1384
1385
1386
1387
1388
1389
1389
1390
1391
1392
13

The most thorough demonstration of the technique was conducted in a junior high school for socially disadvantaged children under a Ford Foundation grant in 1964 and 1965. A full report of this program will be included in the text, Teach Them All to Read (S. Alan Cohen, author to be published by Random House, 1969). Recently, the methods were tried with good results, in the lower grades by Steven Reinstein and Jerry Skapof in grades one and two. Presently, Reinstein has begun a 4-year project in the Bronx substituting skill-centers for I.P.I.

Laws of Learning Underlying the Guidelines and the Program

The guidelines used for building the experimental curriculum for socially disadvantaged junior high school children were based on seven valid laws of learning. A concise list of these laws of learning can be found in Hilgard's classic work, Theories of Learning (New York): Appleton-Century-Crofts, 1956, pp. 486-487). A discussion of each law is presented here:

1. WHEN to teach WHAT depends upon the individual's CAPACITY

For decades, American schools have pre-determined the content of curriculum and the timetable and rate for teaching that content. Those who could not meet the timetable and rate, and those who could not accept the content for various reasons were disposed of via the insidious method called "drop out." Now with a focus on the "disadvantaged", schools can no longer defend this method.

Evidence is now accumulated to show that capacity is largely a learned "perceptual set" influenced primarily by early environmental opportunity in the form of incidental and formal learning (McV. Hunt, Intelligence and Experience. Ronald Press, 1961). The guidelines for the experimental curriculum do not accept the content as given but suggest that content be adjusted to individual need. The author would be hard put to defend any content as being absolutely necessary to the education of disadvantaged children with three exceptions: reading, writing, and arithmetic. The experimental curriculum implies that all children have to learn to read to be free in modern society.

The guidelines to this curriculum recognize that the WHEN must vary from individual to individual--hence, the individualized, high intensity learning program is proposed.

2. A motivated learner acquires what he learns more readily than one who is not motivated.

In the guidelines motivation is handled according to valid laws of learning:

- a. Motivation that is too intense (pain, fear, or extreme anxiety) may introduce to learning distracting emotional states. Every youngster has strengths or weaknesses. In an individualized self-directing program each youngster moves at his own pace in a direction dictated by his own diagnosed strengths and weaknesses. In such a program a youngster recognizes that two other classmates working on another skill, in another part of the room, do not have the same weaknesses. Their problems are different. Individual differences are obvious not only to the teacher, but to the pupils as well. Instead of punishing a youngster for his weaknesses, the self-directing program rewards him for helping discover his own weakness and for remediating that weakness. Ego defense is unnecessary. Finally, the system provides a floating teacher who can boost the ego of the threatened child and control the level of motivation.
- b. Learning under intrinsic motivation is preferable to learning under extrinsic motivation. The entire program is built on achievement success rewards. Not grades or candy, but successful achievement of a skill is the basic motivation. Research indicates that achievement success feeds on itself and drives the subject to further achievement. Every normal youngster wants to succeed.
- c. Success or positive reward is preferable to negative reward, failure, or punishment. Research shows that target behaviors in the lab tend to be learned equally as well with positive or negative reinforcers. However, most learning specialists agree that side effects or "social by-products" (non-target behaviors) are more favorable when learning is reinforced positively. In the experimental program, failure or lack of success is a temporary state. The goal is success: the methodology offers each individual the chance to succeed.
- d. Tolerance for failure is best taught through providing a backlog of success that compensates for experienced failure. By focusing on strengths and weaknesses and on specific operations, the experimental program matches materials to strengths to insure success, and to weaknesses to insure growth. Learning goals are defined operationally in very specific subskills. Individuals move step by step through a complex pattern with high incidence of success. Success is built in, so that it compensates for occasional failure. When it does not, the program provides a floating teacher comes

to the aid of the individual, because all of his time is not monopolized by the whole class.

3. Individuals need practice in setting goals for themselves, goals neither so low as to elicit little effort nor so high as to foreordain to failure. Realistic goal-setting leads to more satisfactory improvement than unrealistic goal-setting. In the program, instruction is largely self-directing. The individual pupil is making decisions. He constantly checks and paces himself. His teacher is a consultant who offers suggestions for goals and for means.
4. Active participation by a learner is preferable to passive reception.
The program's primary feature is high intensity learning. Frequency of response is high because instruction is individualized. The program incorporates this feature of a tutorial system while preserving the advantages of a group experience by using self-teaching materials that could be used either individually or in learning teams. The student does the teaching in conjunction with materials, classmates, and a supervising teacher.
5. Meaningful tasks are learned more efficiently than tasks not understood by the learner.
In the experimental program this learning principle is fulfilled through a sixth principle.
6. Information about the nature of a good performance, knowledge of successful results aid learning.
Many educators insist that all materials should relate directly to the student's needs or interests. So, for example they argue that basal reader content is relatively meaningless to culturally deprived youngsters who cannot relate to the middle class content. This is an excellent guiding principle. The materials and tasks of the model program should conform to the student's needs or interests.
However, there are other types of meaning. This is implied in research which indicates, for example, that basal readers are as effective as "high interest" literature in teaching reading. Knowledge of one's strengths and weaknesses, knowledge of the nature and reason for a task, knowledge of goals, knowledge of results of drill exercises, and the chance to succeed, give these tasks and materials tremendous meaning for individuals who want to succeed.
A good learning program uses both types of meaning to promote learning.
7. The personal history of the individual, for example, his reaction to authority, may hamper or enhance his ability to learn from a given teacher.

The day may come when teachers and administrators are psychologically secure enough to recognize individual differences of temperament and perception and are willing to transfer youngsters in order to best match teacher-student personalities. Meanwhile, a teaching program that allows both maximum and minimum contact between teacher and student will help us adjust to this problem. Under the experimental program, a youngster who can not relate to his teacher (or vice versa) benefits from the self-teaching program and from close personal interaction with classmates in learning teams.

The Skills Centers Program presents a practical approach to educating underachieving disadvantaged youth. It is designed, therefore, for schools plagued by rigid class schedules, restricted physical plants, large teacher-pupil ratios and low staff morale. The program structures an environment conducive to learning in underachievers burdened by serious psycho-social pressures, with histories of school failure and delinquency. Such an environment sets learning as its first priority where learning is defined operationally as an active rather than passive function.

Rather than dissipate educational energy across the huge spectrum of needs, the program selects that area most basic to the child's educational and economic future: reading and literacy skills.

Both the structuring of the learning environment and the zeroing in on reading skills are based on four guidelines to effective methodology, seven valid laws of learning, and seven principles of psycho-social development.

Four Guidelines to Effective Methodology

1. High Intensity Learning - Pupils work individually or in small learning teams on self-directing materials that present a series of programmed stimuli to which each individual responds. Learning is active and continuous. The individual does not have to wait his turn to "recite". He is always "reciting"; He is always responding.
2. Individualized Content - Based on diagnostic testing, children are assigned materials that match their needs. A child works on materials with subgroups of peers who have similar needs. Thus, some youngsters may need phonic skills while others need structural analysis skills. A child does not waste time working on skills he has already mastered.

3. Individualized Speed- Because most of the materials are self-directing and self-correcting, a child moves at his own speed.
4. Individualized Level- Reading selections are varied and individualized so that children read materials closer to their interest and ability levels.

The Role of the Teacher

These guidelines lead to a reduction of teacher-directed activities in which teacher lectures, explains or addresses the entire class, to self-directing, differentiated learning by individuals or by small pupil learning teams. Such guidelines also lead to a new role for the teacher. When pupils are self-directed, the teacher's role changes drastically. This is the most difficult factor in implementing this program, for past experience indicates that the role change is traumatic for most teachers. However, once the teacher survives the initial "breaking in period," the program operates smoothly.

The teacher's role in the program is:

1. Arrange conditions conducive to learning by structuring a "therapeutic classroom." A therapeutic classroom is one that is free of punitive reinforcement for behaviors related to learning. If necessary, punishment may be sparingly used as a response to delinquent social behavior. But it is never used to negatively reinforce incorrect responses by a pupil to a learning stimulus.

Learning involves a behavior change. The human organism tends to resist change, because change is risky business. When we perceive our environment as safe, we are more willing to risk trying a new behavior. If the pupil is presented a stimulus, the response to which may be reinforced negatively by a "red mark against him," ,a "flunk," or a look of disapproval from his teacher, the risk involves censure. There is danger. In danger, the organism flees or fights. The organism rigidifies--we tighten up. Perception and resulting behavior become less flexible. Behavior variations are reduced. Research in psychology, neurophysiology and stress has well established this phenomenon.

A therapeutic classroom accepts the wrong answer without threat of punishment or disapproval. The wrong answer signals our opportunity to learn. The correct answer symbolizes the termination of opportunity to learn--we have already learned. In a therapeutic classroom, the teacher does

not sit in judgment of his pupils. The judge is personal--I. Grades are deemphasized. Ideally, teacher-given grades are eliminated. Objective, self-administered tests are the basis of self-evaluation. The teacher aids the pupil in interpreting the test and in planning activities for learning, but the teacher preserves the individual's rights to judge himself.

2. Teach pupils how to teach themselves. The largest amount of time in this new role is spent in teaching pupils how to direct themselves: How to select materials appropriate to their needs; how to use the materials correctly; how to evaluate, record, and interpret progress charts. This activity requires the teacher's greatest investment of time and results pay off in areas more basic than reading, writing and arithmetic. The payoff comes in the form of independence, confidence, and general maturity--the self-directed man.
3. Insure success by carefully matching materials to needs. The pupil is not a professional. He is neither an expert in diagnosis nor a specialist in educational methodology or materials. The teacher must aid him in diagnosing his needs and has the further obligation of determining what goals are most important to the pupil's needs. Furthermore, the teacher must select the self-directing materials to match the pupil's needs.
4. Diagnose, guide, interpret, and evaluate growth. These activities are always done in conjunction with the pupil as service to him, not as a judgment.
5. Supply on-the-spot first aid when materials do not work or when they are unavailable. Most published materials are designed for traditional teacher-directed methods. Over the next decade this will change. Meanwhile, teachers conducting a self-directing learning classroom will find this job most demanding along with the following task.
6. Develop new materials to solve the problem in the future. This can consume great quantities of preparation time since the numbers of self-directing published materials are minimal. One technique for increasing production of teacher-made self-directing learning materials is to use pupil labor. In a number of programs using the technique described in this experiment, pupils were recruited from "work periods" to produce materials under the teacher's direction. More recently, special corps recruited under Office of Economic Opportunity funds (VISTA, Neighborhood Youth Corps, etc.) have been used to produce materials for various self-directing education programs. In its latest application curriculum specialists will be responsible for generating new materials to meet skill needs in the centers.

7. Personally interact with individuals and small groups.
No other teaching technique, except the one-to-one tutorial method, provides as much teacher-pupil interaction as the self-directing classroom. This technique provides adequately for individual attention. It is the face-to-face interaction that allows the sensitive male teacher to meet the psychological needs of the disadvantaged child who tends to lack satisfying relationships with adult males.
8. Group and continuously regroup small learning teams.
Progress is swift in a self-directing learning program so that children are moving at various paces in various directions. Diagnosis is on-going. Pupil learning teams based on needs are continuously modified at least weekly, and often daily.
9. Introduce lectures, full group activities and enrichment activities
There is nothing inherently bad about teaching thirty children at once. Some activities are effectively presented to a full class a film, trip, discussion, etc. The difference is, that the basic method of a self-directing learning program is individualized instruction and small pupil-team learning units. The full class, teacher directed technique is one minor variation in the teacher's repertoire and is used only when it is the most effective means of learning for the pupils.

Testing:

All children are pre-tested on the Cohen-Cloward Diagnostic Test of Word Attack Skills and the California Reading Test, Junior High School version. These tests yield diagnostic patterns for each child. Alternate versions of the same tests are used to assess progress.

Children form three classes of usual size (20 to 30). They are grouped homogeneously on any variable the school chooses or heterogeneously, depending upon the school's policy.

Schedule:

Each class begins a three class-hour cycle in one of the three learning centers: Word Analysis-Vocabulary Center, Comprehension Center, Work-Study Skills Center. At the end of each class hour, the classes rotate from one center to the next. Thus, each class works in each center daily.

Teaching Assignments:

Each of three teachers specializes in one of the three areas covered by the Centers. Each morning and afternoon they

meet as a team to prepare materials and plan activities.

Learning Centers:

Study Skills Center: Every pupil works on self-teaching self-correcting materials. As the program progresses, more traditional techniques are re-introduced to teach study skills through world history in Abramowitz's World History Study Lessons (Follett Publishing Co.)

Most of the other instruction is self-directed. Every Monday, each class is regrouped into four subgroups according to levels and needs. Each group works together in clusters. Group members receive weekly schedules or materials and time allotments.

Materials that we programmed, are restructured with answer pages. Or, answers are posted on the ANSWER CORNER bulletin board. This allows youngsters to check themselves immediately. Pupils record their own scores on progress charts kept in folders stored in the center of the room.

On speed reading exercises, youngsters compute words per minute, converting to and from words per second. For many seventh and eighth graders, this is the first time they will have mastered long division with decimals.

In the Centers, progress charts are actually bar graphs and histograms, some with two or three variables per graph. This is an effective indirect method of teaching graph reading.

A typical 44-minute class schedule for one child might include 15 minutes on English 2200, 20 minutes on Programed Geography, and 5-10 minutes on Gates Peardon Practice Exercises. Children take pre and post check tests.

The teacher "floats" matching needs to materials, regrouping and administering educational first aid.

Comprehension Center: Like the other Learning Center, the Comprehension Center is entirely self-directing with large group instruction limited to demonstrations of how to use the self-teaching materials. The Comprehension Center stresses three techniques; reading comprehension in reading labs and classroom library, training on a reading machine, and training in listening comprehension.

Listening comprehension exercises are drawn from SRA Reading Lab Teacher Manuals and recorded on Cassette tapes,. Six to eight headsets are plugged into Koss T-4 couplers which are connected to a tape recorder. Pupils sit at a long table converted into small learning booths with masonite partitions.

Word Study Center: Both vocabulary and word attack skills are presented through a variety of materials. Again, most of the activities are self-directing and self-correcting.

The authors have introduced a further systemization component into Skills Centers through the use of a Taxonomy of Methods and Materials to Teach Reading (developed by Tannenbaum and Cohen). Teachers are trained in the use of the taxonomy in order to operationalize the descriptive and prescriptive aspects of the program. Skills, channels of communication, and teaching strategies are codified. The teachers use the taxonomy to prescribe materials for the children. At the same time, the reading team can evaluate the program's effectiveness by noting the extent to which taxonomic prescriptions conform to, or deviate from, what's being done in the centers.

The Skill-Centers approach is not a panacea. It does not purport to do miracles. However, the authors feel that such a methodology represents a total reading system that contains more applications of research findings than the vast majority of reading programs currently in use in our schools today. The program is a "system" because it has delineated a specific set of materials to be used by teachers employing a specific set of strategies. In this form, the system (materials, strategies and personnel to operate the materials and strategies) is deliverable to a classroom as a unit.